

CR Number: 3013

External Reference: SAFER CR 139, SAFER CR 164

Category: SAFER XML, SAFER ICD

Component: SAFER/CVIEW

Synopsis: Standardization of data values in XML input transactions.

Summary: Data elements input to SAFER must be standardized to ensure data quality and integrity.

Proposal: Volpe will draft SAFER data requirements and distribute to stakeholder for review and discussion.

Status: Recommended

Disposition: [2004-11-22] Recommended for FMCSA approval. Volpe will report on analysis results.

Description: [2004-10-18] During the 9/23 ACCB meeting Volpe led a discussion regarding left-justification of the CVIS_DEFAULT_CARRIER field. This is a data integrity issue that applies to many data elements, especially to those that could be interpreted as either character or numeric. Each XML transaction needs to be reviewed, but a general approach to addressing this issue is needed. Volpe will write one or more CRs to address this issue. The solution for the immediate problem with Nebraska registration data is that Nebraska will left-justify the values in the CVIS_DEFAULT_CARRIER field and re-baseline - this specific instance is addressed in Arch CR 2954 (SAFER CR 138). Arch CR 3013 (SAFER CR 139) addresses the general problem.

[2004-10-18] From SAFER CR 139

When searching data against the SAFER database, it has brought to our attention that some key data fields submitted from the XML input transactions are provided in an inconsistent manner.

A good example is that the IRP_ACCOUNT_NUMBER in T0020 can have leading zeros, leading space and etc. Another example is IRP_CARRIER_ID_NUMBER OR CVIS_DEFAULT_CARRIER in T0022 where leading zeros and null can be an issue to CVISN or PRISM states.

This CR is intended to address the need to standardize the input data fields as to how the data value should be provided to SAFER. The result of this effort shall improve the data integrity and data quality of the SAFER database.

The Volpe Center is conducting technical analysis on all XML input transactions and the SAFER database. Based on the analysis, a draft of SAFER data requirements will be developed and distributed to the stakeholders for review and discussion.

[2004-10-25] Presented and discussed at the 2004-10-21 ACCB meeting.
This CR will be posted to the CVISN System Architects list serv for review.

[2004-11-22] Presented and discussed at the ACCB meeting on 2004-11-18.
Recommended for FMCSA approval. Volpe is continuing their analysis of this problem and will report back. Approved for Volpe to work on standards. When complete, a draft of SAFER data requirements will be distributed to the stakeholders for review and discussion.

[2005-03-01]

Contents of SAFER CR 164: This CR is created for a defect identified by MDCVIEW & APLCVIEW. Some vehicle data provided by SAFER has IRP_Weight_Carried with a null, blank or zero value. It is suggested that there should be a constraint for the value of IRP_Weight_Carried submitted from CVIEW.

If Vehicle_IRP_Juris.IRP_Jurisdiction is not null, the
Vehicle_IRP_Juris.IRP_Weight_Carried must be a number greater than 10,000.
Blank, null and zero weights should not be allowed.

In the current design of SAFER, Vehicle_IRP_Juris.IRP_Jurisdiction and
Vehicle_IRP_Juris.IRP_Weight_Carried are both mandatory fields for XML input.
However there is no specific requirement for the input value. The datatype of
Vehicle_IRP_Juris.IRP_Weight_Carried is Varchar(8) which allows blank, null and
zero values to exist in SAFER.

Volpe will perform technical analysis to determine whether the value checking shall
be implemented during the input process or at the database level.

-----End SAFER CR 164

[2005-03-01] Architecture CR 2094 (SAFER CR 164) was presented and discussed at
the 2/17/05 ACCB meeting.

Volpe pointed out that SAFER release 4.9 will already make this a mandatory field
whenever a jurisdiction is provided, which meets a significant objective of the CR.
The remaining significant issue is to block zero values. The ACCB decided that this
CR could be incorporated into SAFER CR 139 (Arch CR 3013): Standardization of
data values in XML input transactions and will be discussed at the next ACCB
meeting.

[2005-03-21] SAFER CR 139 was presented and discussed at the 3/17/05 ACCB
meeting.

Volpe took a first cut at standardizing data elements by looking at the key identifiers
in transactions T0019, T0020, T0021, T0022 and T0024 and presented an Excel
spreadsheet to the ACCB. The key identifiers potentially handle numbers in the input
files with varchar2 as the data type in the database. Leading zeroes/spaces, trailing
spaces and nulls are a common problem. It was mentioned that some states use
leading zeroes as part of the number, such as, IRP_account_number. Others use
special characters in the License_plate_number. States suggested taking the
spreadsheet back to their IRP folks for review and then providing feedback to Volpe.
The spreadsheet is attached.

[2005-04-25] Presented at the 4/21/05 ACCB meeting.

Volpe will compile the comments received and continue their analysis of the CR.
States are encouraged to review the excel spreadsheet and send comments via the list
serv.

[2005-08-02] Presented at the 7/28/05 ACCB meeting.

Seven states have commented on Volpe's proposed solution, which was posted to the
list serv after the June ACCB meeting. Volpe will post the updated spreadsheet to the
CVISN System Architects list serv and solicit a final round of comments.

Fix:

Comment:

Attachment CR139_data standardization.xls 2004-05-20 CR3013-SAFER139_data

names: standardization_Comments.xls

Responsibility:

Modified Time: 8/2/2005 7:50:26 AM

Modified By: Magnusson Nancy C.

Entered On: 10/18/2004 2:19:57 PM

Entered By: Magnusson Nancy C.

Severity: Medium

Priority: No

Type: Suggestion

Closed On: